

**Directed Differentiation of Embryonic Cells**

**Abstract**

5           Methods are described for mapping a pathway of differentiation of a population of  
embryonic cells which includes exposing the cells to an exogenous factor and measuring gene  
expression products that are characteristic of a particular cell type or lineage. Directing  
differentiation of human embryonic cells relies on dissociated embryoid bodies which are then  
exposed to one or more exogenous factors to enrich a culture for a particular cell type. The  
10   differentiated cells may be used for treating a medical condition in a human. Kits for determining  
differentiation pathways and screening exogenous factors for their utility in differentiation are  
provided.